


Exhibit 9

Exhibit 9: U.S. Patent No. 7,372,960

Claim 3	Exemplary Evidence of Infringement
<p>3[pre] A method of performing a finite field operation on elements of a finite field, comprising the steps of:</p>	<p>MARA Holdings, Inc. (hereinafter “MARA”) performs a method for finite field operation on elements of a finite field during the transfer of Bitcoin to an address, which is a cryptographic operation. <i>See, e.g.:</i></p> <p>“Marathon is a digital asset technology company that is principally engaged in producing or <u>‘mining’ digital assets with a focus on the Bitcoin ecosystem</u> ... <u>The term ‘Bitcoin’ with a capital ‘B’ is used to denote the Bitcoin protocol</u> which implements a highly available, public, permanent, and decentralized ledger.” (Emphasis added)</p> <p><i>See, e.g.,</i> MARA Holdings, Inc., Annual report pursuant to Section 13 and 15(d), (Form 10-K/A), at F-9, filed May 24, 2024, available at https://ir.mara.com/sec-filings/all-sec-filings/content/0001628280-24-025261/mara-20231231.htm.</p> <p>“The Bitcoin protocol is the technology that enables Bitcoin to function as a decentralized, peer-to-peer payment network. This open-source software, which sets the rules and processes that govern the Bitcoin network, is maintained and improved by a community of developers around the world known as Bitcoin Core developers ... ‘At Marathon, we have historically focused on supporting Bitcoin by adding hash rate, which helps secure the network, and now, we are supporting those who maintain <u>the open-source protocol on which we all depend</u> by contributing to Brink,’ said Fred Thiel, Marathon’s chairman and CEO.” (Emphasis added)</p> <p><i>See, e.g.,</i> Marathon Holdings Collaborates with Brink To Raise Up to \$1 Million To Support Bitcoin Core Developers, GlobeNewswire (May 18, 2023), available at https://www.globenewswire.com/news-release/2023/05/18/2672276/0/en/Marathon-Digital-Holdings-Collaborates-with-Brink-To-Raise-Up-to-1-Million-To-Support-Bitcoin-Core-Developers.html.</p> <p>“The MaraPool wallet (Owned by the Company as Operator) is recorded on the distributed ledger as the winner of proof-of-work block rewards and assignee of all validations and, therefore, the transaction verifier of record. The pool participants entered into contracts with the Company as Operator; they did not directly enter into contracts with the network or the requester and were not</p>

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	<p>known verifiers of the transactions assigned to the pool...Therefore, the Company determined that it controlled the service of providing transaction verification services to the network and requester. <u>Accordingly, the Company recorded all of the transaction fees and block rewards earned from transactions assigned to the MaraPool as revenue, and the portion of the transaction fees and block rewards remitted to the MaraPool participants as cost of revenues.</u>” (Emphasis added).</p> <p><i>See, e.g.,</i> MARA Holdings., Inc., Quarterly report, (Form 10-Q), at Note 4 – Revenues, filed November 12, 2024, available at https://www.sec.gov/ix?doc=/Archives/edgar/data/0001507605/000162828024047148/mara-20240930.htm.</p>  <p><i>See, e.g.,</i> https://mempool.space/address/15MdAHnkxt9TMC2Rj595hsg8Hnv693pPBB.</p> <p><u>“Bitcoin signed messages have three parts, which are the Message, Address, and Signature.</u> The message is the actual message text - all kinds of text is supported, but it is recommended to avoid using non-ASCII characters in the signature because they might be encoded in different character sets, preventing signature verification from succeeding.</p> <p>The address is a legacy, nested segwit, or native segwit address. Message signing from legacy addresses was added by Satoshi himself and therefore does not have a BIP. <u>Message signing from segwit addresses has been added by BIP137 ... The Signature is a base64-encoded ECDSA signature</u> that, when decoded, with fields described in the next section.” (Emphasis added)</p> <p><i>See, e.g.,</i> Message Signing, https://en.bitcoin.it/wiki/Message_signing.</p>

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	<p>“This document describes a signature format for <u>signing messages with Bitcoin private keys</u>.</p> <p>The specification is intended to describe the standard for signatures of messages that can be signed and verified between different clients that exist in the field today.” (Emphasis added)</p> <p><i>See, e.g.,</i> Bitcoin BIP137, https://github.com/bitcoin/bips/blob/master/bip-0137.mediawiki.</p> <p>For example, in secp256k1, type secp256k1_fe consists of 5 or 10 machine words, depending on the machine’s word size: “field_5x52.h” applies to machines with 64bit word size and “field_10x32.h” applies to machines with 32bit word size. <i>See, e.g.:</i></p> <pre> /** This field implementation represents the value as 5 uint64_t limbs in base * 2^52. */ typedef struct { /* A <u>field element f</u> represents the sum(i=0..4, f.n[i] << (i*52)) mod p, * where <u>p is the field modulus, 2^256 - 2^32 - 977.</u> * * The individual limbs f.n[i] can exceed 2^52; the field's magnitude roughly * corresponds to how much excess is allowed. The value * sum(i=0..4, f.n[i] << (i*52)) may exceed p, unless the field element is * normalized. */ <u>uint64_t n[5];</u> /* * Magnitude m requires: * n[i] <= 2 * m * (2^52 - 1) for i=0..3 * n[4] <= 2 * m * (2^48 - 1) * * <u>Normalized requires:</u> * n[i] <= (2^52 - 1) for i=0..3 * sum(i=0..4, n[i] << (i*52)) <= <u>p</u> * (together these imply n[4] <= 2^48 - 1) */ SECP256K1_FE_VERIFY_FIELDS } <u>secp256k1_fe</u>; </pre> <p><i>See, e.g.,</i> bitcoin/src/secp256k1/src/field_5x52.h</p>

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	<p>“The points on the elliptic curve are the pairs of finite field elements.” <i>See, e.g.,</i> ’960 pat. at col. 1, lines 45-47.</p> <pre> /** A group element in affine coordinates on the secp256k1 curve, * or occasionally on an isomorphic curve of the form $y^2 = x^3 + 7t^6$. * ... */ typedef struct { secp256k1_fe x; secp256k1_fe y; int infinity; /* whether this represents the point at infinity */ } secp256k1_ge; ... /** A group element of the secp256k1 curve, in jacobian coordinates. * ... */ typedef struct { secp256k1_fe x; /* actual X: x/z^2 */ secp256k1_fe y; /* actual Y: y/z^3 */ secp256k1_fe z; int infinity; /* whether this represents the point at infinity */ } secp256k1_gej; </pre> <p><i>See, e.g.,</i> bitcoin/src/secp256k1/src/group.h</p>
<p>3[a] a) representing each element as a predetermined number of machine words;</p>	<p>MARA’s miners represent each element as a predetermined number of machine words.</p> <p>For example, in secp256k1, type secp256k1_fe consists of 5 or 10 machine words, depending on the machine’s word size: “field_5x52.h” applies to machines with 64bit word size and “field_10x32.h” applies to machines with 32bit word size. <i>See, e.g.:</i></p> <pre> /** This field implementation represents the value as 5 uint64_t limbs in base * 2^{52}. */ typedef struct { </pre>

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	<pre> /* A <u>field element f</u> represents the $\text{sum}(i=0..4, f.n[i] \ll (i*52)) \bmod p$, * where <u>p is the field modulus, $2^{256} - 2^{32} - 977$.</u> * * The individual limbs $f.n[i]$ can exceed 2^{52}; the field's magnitude roughly * corresponds to how much excess is allowed. The value * $\text{sum}(i=0..4, f.n[i] \ll (i*52))$ may exceed p, unless the field element is * normalized. */ <u>uint64_t n[5];</u> /* * Magnitude m requires: * $n[i] \leq 2 * m * (2^{52} - 1)$ for $i=0..3$ * $n[4] \leq 2 * m * (2^{48} - 1)$ * * <u>Normalized requires:</u> * $n[i] \leq (2^{52} - 1)$ for $i=0..3$ * $\text{sum}(i=0..4, n[i] \ll (i*52)) \leq p$ * (together these imply $n[4] \leq 2^{48} - 1$) */ SECP256K1_FE_VERIFY_FIELDS } <u>secp256k1_fe</u>; See, e.g., bitcoin/src/secp256k1/src/field_5x52.h “The points on the elliptic curve are the pairs of finite field elements.” See, e.g., '960 pat. at col. 1, lines 45-47. /** <u>A group element in affine coordinates on the secp256k1 curve,</u> * or occasionally on an isomorphic curve of the form $y^2 = x^3 + 7 * t^6$. * ... */ typedef struct { <u>secp256k1_fe</u> x; <u>secp256k1_fe</u> y; int infinity; /* whether this represents the point at infinity */ } secp256k1_ge; ... /** A group element of the secp256k1 curve, in jacobian coordinates. </pre>

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	<pre> * ... */ typedef struct { secp256k1_fe x; /* actual x: x/z^2 */ secp256k1_fe y; /* actual y: y/z^3 */ secp256k1_fe z; int infinity; /* whether this represents the point at infinity */ } secp256k1_gej; </pre> <p><i>See, e.g., bitcoin/src/secp256k1/src/group.h</i></p>
<p>3[b] b) performing a non-reducing wordsized operation on said representations, said wordsized operation corresponding to said finite field operation;</p>	<p>MARA's miners perform a non-reducing wordsized operation (e.g., executing secp256k1_ge_set_gej) on said representations, said wordsized operation corresponding to said finite field operation.</p> <p>For example, the result of secp256k1_ge_set_gej is unreduced and needs normalizing. <i>See, e.g.:</i></p> <pre> static int secp256k1_ecdsa_sig_sign(const secp256k1_ecmult_gen_context *ctx, secp256k1_scalar *sigr, secp256k1_scalar *sigs, const secp256k1_scalar *seckey, const secp256k1_scalar *message, const secp256k1_scalar *nonce, int *recid) { ...; secp256k1_ge r; ...; secp256k1_ecmult_gen(ctx, &r, nonce); secp256k1_ge_set_gej(&r, &rp); secp256k1_fe_normalize(&r.x); secp256k1_fe_normalize(&r.y); secp256k1_fe_get_b32(b, &r.x); secp256k1_scalar_set_b32(sigr, b, &overflow); ...; if (...) { *recid = (...) secp256k1_fe_is_odd(&r.y); } ...; } </pre> <p><i>See, e.g., bitcoin/src/secp256k1/src/ecdsa_impl.h</i></p> <p>The function secp256k1_ge_set_gej invokes secp256k1_fe_mul. That function invokes secp256k1_fe_impl_mul. That function invokes secp256k1_fe_mul_inner. Function</p>

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	<p>secp256k1_u128_accum_mul is then invoked for each word of above finite field element r (typed secp256k1_ge). <i>See, e.g.:</i></p> <pre>/* Multiply two unsigned 64-bit values a and b and write the result to r. */ static SECP256K1_INLINE void secp256k1_u128_mul(secp256k1_uint128 *r, uint64_t a, uint64_t b);</pre> <p><i>See, e.g., bitcoin/src/secp256k1/src/int128.h</i></p>
<p>3[c] c) completing said non-reducing wordsized operation for each word of said representations to obtain an unreduced result;</p>	<p>MARA's miners complete said non-reducing wordsized operation (<i>e.g.</i>, executing secp256k1_ge_set_gej) for each word of said representations to obtain an unreduced result.</p> <p>For example, the result of secp256k1_ge_set_gej is unreduced and needs normalizing. <i>See, e.g.:</i></p> <pre>static int secp256k1_ecdsa_sig_sign(const secp256k1_ecmult_gen_context *ctx, secp256k1_scalar *sigr, secp256k1_scalar *sigs, const secp256k1_scalar *seckey, const secp256k1_scalar *message, const secp256k1_scalar *nonce, int *recid) { ...; secp256k1_ge r; ...; secp256k1_ecmult_gen(ctx, &rp, nonce); secp256k1_ge_set_gej(&r, &rp); secp256k1_fe_normalize(&r.x); secp256k1_fe_normalize(&r.y); secp256k1_fe_get_b32(b, &r.x); secp256k1_scalar_set_b32(sigr, b, &overflow); ...; if (...) { *recid = (...) secp256k1_fe_is_odd(&r.y); } ...; }</pre> <p><i>See, e.g., bitcoin/src/secp256k1/src/ecdsa_impl.h</i></p> <p>The function secp256k1_ge_set_gej invokes secp256k1_fe_mul. That function invokes secp256k1_fe_impl_mul. That function invokes secp256k1_fe_mul_inner. Function secp256k1_u128_accum_mul is then invoked for each word of above finite field element r (typed secp256k1_ge). <i>See, e.g.:</i></p> <pre>/* Multiply two unsigned 64-bit values a and b and write the result to r. */</pre>

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	<pre>static SECP256K1_INLINE void secp256k1_u128_mul(secp256k1_uint128 *r, <u>uint64_t</u> a, <u>uint64_t</u> b);</pre> <p><i>See, e.g., bitcoin/src/secp256k1/src/int128.h</i></p>
<p>3[d] d) upon computing said unreduced result, performing a specific modular reduction of said unreduced result to reduce said unreduced result to that of a field element of said finite field to obtain a reduced result; and</p>	<p>MARA's miners, upon computing said unreduced result, perform a specific modular reduction (<i>e.g.</i>, <code>secp256k1_fe_normalize</code>) of said unreduced result to reduce said unreduced result to that of a field element of said finite field to obtain a reduced result.</p> <p>For example, the result of <code>secp256k1_ge_set_gej</code> is unreduced and needs normalizing. <i>See, e.g.:</i></p> <pre>static int secp256k1_ecdsa_sig_sign(const secp256k1_ecmult_gen_context *ctx, secp256k1_scalar *sigr, secp256k1_scalar *sigs, const secp256k1_scalar *seckey, const secp256k1_scalar *message, const secp256k1_scalar *nonce, int *recid) { ...; secp256k1_ge r; ...; secp256k1_ecmult_gen(ctx, &rp, nonce); secp256k1_ge_set_gej(&r, &rp); <u>secp256k1_fe_normalize</u>(&r.x); <u>secp256k1_fe_normalize</u>(&r.y); secp256k1_fe_get_b32(b, &<u>r.x</u>); secp256k1_scalar_set_b32(sigr, b, &overflow); ...; if (...) { *recid = (...) secp256k1_fe_is_odd(&<u>r.y</u>); } ...; }</pre> <p><i>See, e.g., bitcoin/src/secp256k1/src/ecdsa_impl.h</i></p> <p>The function <code>secp256k1_ge_set_gej</code> invokes <code>secp256k1_fe_mul</code>. That function invokes <code>secp256k1_fe_impl_mul</code>. That function invokes <code>secp256k1_fe_mul_inner</code>. Function <code>secp256k1_u128_accum_mul</code> is then invoked for each word of above finite field element r (typed <code>secp256k1_ge</code>). <i>See, e.g.:</i></p> <pre>/* Multiply two unsigned 64-bit values a and b and write the result to r. */ static SECP256K1_INLINE void secp256k1_u128_mul(secp256k1_uint128 *r, uint64_t a, uint64_t b);</pre>

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	<p><i>See, e.g.,</i> bitcoin/src/secp256k1/src/int128.h</p> <p>The function <code>secp256k1_fe_impl_normalize</code> ensures a field element does not exceed “field modulus, $2^{256} - 2^{32} - 977$”, per “field_5x52.h”. <i>See, e.g.:</i></p> <pre>SECP256K1_INLINE static void <u>secp256k1_fe_normalize</u>(secp256k1_fe *r) { ...; <u>secp256k1_fe_impl_normalize</u>(r); ...; }</pre> <p><i>See, e.g.,</i> bitcoin/src/secp256k1/src/field_impl.h</p> <pre>static void <u>secp256k1_fe_impl_normalize</u>(secp256k1_fe *r) { uint64_t t0 = r->n[0], t1 = r->n[1], t2 = r->n[2], t3 = r->n[3], t4 = r->n[4]; /* <u>Reduce</u> t4 at the start so there will be at most a single carry from the first pass */ ...; /* The first pass ensures the magnitude is 1, ... */ ...; /* ... except for a possible carry at bit 48 of t4 (i.e. bit 256 of the field element) */ ...; /* At most a single final <u>reduction is needed</u>; check if the value is >= the field characteristic */ ...; /* Apply the final reduction (for constant-time behaviour, we do it always) */ ...; /* If t4 didn't carry to bit 48 already, then it should have after any final reduction */ ...; /* Mask off the possible multiple of 2^{256} from the final reduction */ ...; <u>r->n[0]</u> = t0; <u>r->n[1]</u> = t1; <u>r->n[2]</u> = t2; <u>r->n[3]</u> = t3; <u>r->n[4]</u> = t4; }</pre> <p><i>See, e.g.,</i> bitcoin/src/secp256k1/src/field_5x52_impl.h</p>
<p>3[e] e) using said reduced result in a cryptographic operation.</p>	<p>MARA’s miners use said reduced result in a cryptographic operation.</p> <p>For example, the result of <code>secp256k1_ge_set_gej</code> is unreduced and needs normalizing. <i>See, e.g.:</i></p> <pre>static int secp256k1_ecdsa_sig_sign(const secp256k1_ecmult_gen_context *ctx, secp256k1_scalar *sigr, secp256k1_scalar *sigs, const secp256k1_scalar *seckey, const secp256k1_scalar *message, const secp256k1_scalar *nonce, int *recid) { ...; secp256k1_ge r; ...;</pre>

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	<pre> secp256k1_ecmult_gen(ctx, &rp, nonce); secp256k1_ge_set_gej(&r, &rp); secp256k1_fe_normalize(&r.x); secp256k1_fe_normalize(&r.y); <u>secp256k1_fe_get_b32</u>(b, &r.x); <u>secp256k1_scalar_set_b32</u>(sigr, b, &overflow); ...; if (...) { <u>*recid</u> = (...) secp256k1_fe_is_odd(&r.y); } ...; } </pre> <p><i>See, e.g., bitcoin/src/secp256k1/src/ecdsa_impl.h</i></p> <p>The function <code>secp256k1_ge_set_gej</code> invokes <code>secp256k1_fe_mul</code>. That function invokes <code>secp256k1_fe_impl_mul</code>. That function invokes <code>secp256k1_fe_mul_inner</code>. Function <code>secp256k1_u128_accum_mul</code> is then invoked for each word of above finite field element r (typed <code>secp256k1_ge</code>). <i>See, e.g.:</i></p> <pre> /* Multiply two unsigned 64-bit values a and b and write the result to r. */ static SECP256K1_INLINE void secp256k1_u128_mul(secp256k1_uint128 *r, uint64_t a, uint64_t b); </pre> <p><i>See, e.g., bitcoin/src/secp256k1/src/int128.h</i></p>